OE FORM 6000, 2/69

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ERIC ACC. NO.				IS DOCUMENT COPYRIGHTED?	YES ☐ NO ☒
ED 039 396				ERIC REPRODUCTION RELEASE?	YES ☐ NO ☐
CH ACC. NO.	P.A.	PUBL. DATE	ISSUE	LEVEL OF AVAILABILITY	I ☒ II ☐ III ☐
AA 000 574		67	RIEOCT70		

AUTHOR
Pearson, Richard; Manning, Winton, H.

TITLE
The Background of the Commission on Tests.

SOURCE CODE	INSTITUTION (SOURCE)
QPX15900	College Entrance Examination Board, New York, N.Y.
SP. AG. CODE	SPONSORING AGENCY

EDRS PRICE	CONTRACT NO.	GRANT NO.
0.25;0.95		
REPORT NO.		BUREAU NO.

AVAILABILITY

JOURNAL CITATION

DESCRIPTIVE NOTE
17p.

DESCRIPTORS *Educational Testing; *College Admission; *Admission Criteria; *Testing Problems; *Test Validity; Educational Change; Test Construction; Objectives; Test Reliability; Testing; Test Selection; High School Graduates

IDENTIFIERS College Entrance Examination Board; Commission On Tests

ABSTRACT This paper concerns the projected changes suggested for testing in the future by the College Entrance Examination Board (CEEB). A Commission on Tests is held desirable, the general purpose of which is to describe a comprehensive series of testing activities supporting the large-scale distribution of students among college level institutions in the United States, under conditions in which as much as 80 percent high school graduates and 70 percent of 18-year-olds (and together with significant numbers of adults) will enter college each year. While suggesting preservation of some very important strengths in present testing procedures by CEEB, the Board's testing activities are held inadequate. Guidelines for the future educational setting of college admissions and guidance tests are presented. It is contended that the description of the proposed tests should focus on the general population of young people at four points in their educational careers--in grades seven and eight, in grades ten and eleven, at the end of grade twelve, and in the thirteenth and fourteenth years by age. Review of the theory and practice underlying existing tests and relating these to current knowledge and generally accepted principles in a number of fields (psychometrics, education, linguistics, sociology and anthropology, and cybernetics and computer sciences) is recommended. An initial description of the objectives of future tests is also included. (RJ)

ED 039 396

The Background of the Commission on Tests

Richard Pearson and Winton H. Manning
College Entrance Examination Board, ~~1967~~

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AA 000 574

College Entrance Examination Board, 1967.

The Background of the Commission on Tests

Richard Pearson and Winton H. Manning

The interest of the College Board in enlarging opportunities for access to higher education has historically found one expression in the development of tests and services in support of the process of college admissions. The nature of these examinations -- their definition, relevance, and equity -- has important implications for a variety of sectors of our society. The examinations serve as one of the critical determiners of the careers of young people, thereby touching the lives of many persons. They are outstanding examples of the social sciences in action and therefore must represent the best these sciences can offer to this problem. They are a principal means by which many colleges appraise their candidates, and their influence on the life of these institutions, though subtle, is pervasive. Further, in a nation and economy whose continued growth increasingly depends on nurturing its human resources, these examinations are potent influences on the flow of talent through the educational system, and hence on the vitality of our national life. Thus the obligation of the Board to subject its tests to scrutiny, through research and informed evaluation, derives not only from a need to respond to the interests of its membership but principally from its broader responsibilities to young people and to society.

Every observer of the educational scene has noted the far-reaching changes that grip all levels of the educational enterprise. At no point are the stresses that accompany these changes more critical than in the period comprising the Board's primary concerns -- the transition

from school to college. Projections of future changes suggest that the time has now come when the foundation and philosophy underlying the existing tests must be re-examined, and new testing strategies must be devised, if the response of the Board to the challenge of these changes is to be vigorous and effective. It is therefore particularly appropriate that the cutting edge of this intensive evaluation should be a Commission on Tests.

Conception of the Commission

The general purpose of the Commission is to describe a comprehensive series of testing activities that will best support the large-scale distribution of students among the various colleges and universities in the United States, under conditions in which as much as 80 percent of high school graduates and as much as 70 percent of 18-year-olds, together with significant numbers of adults, will make up the college-going population each year. Our belief is that the Board's testing activities are inadequate for this purpose, for a number of reasons.

- Historically, the tests are associated with the identification and selection of an elite for college, under the assumption that the definition of "college" connotes the study of the liberal arts and preparation for graduate and professional school work.

- The present tests place heavy emphasis on abstract reasoning ability and on achievement in traditional college preparatory subjects. They do not recognize other abilities that may be more relevant to newer college-level programs, nor do they recognize achievement in secondary school subjects not traditionally associated with college preparation.

- The level of difficulty of the present tests is geared to the top 30 percent of the high school graduates of the country, whereas today 55 percent of high school graduates attend some form of postsecondary education. Informed projections indicate that this percentage will increase.

- There is considerable redundancy between the information gained from the present tests and the information gained from the secondary school record. This is partly attributable to how heavily we rely on high school and college grades as criteria for developing the tests. The result is that relatively less independent information is contributed by the present tests than is desirable.

- Arguments have been advanced to the effect that the present tests obscure student individuality at both extremes of the aptitude distribution. At one end they have been criticized for presenting too narrow and restrictive a view of high-level talent among the student population. At the other end they have been criticized for failing to present positive information about student potential from Negroes and other groups overrepresented in the poverty population.

- The present tests are oriented more to the needs of a limited group of colleges and universities for the selection of their entering classes than they are to the needs of a diverse student population for selection and choice among, and placement within, a variety of college-level programs.

The foregoing inadequacies are by no means limited to the present tests of the Board. For the most part, they would apply also to any widely used set of tests, whether

they are called tests of general ability or educational development or achievement. They are, basically, limitations of testing theory and practice as developed during the 1930s and 1940s.

While these inadequacies are considered serious enough to cause us to seek major change and extension in the existing tests, it would be well to remember that there are some very important strengths associated with the present tests, which must be preserved.

- They have reasonable validity for the academic programs in most four-year colleges and universities and for most college preparatory programs in secondary school, although they are probably not as useful as they might be for course placement decisions.

- The present tests place emphasis on the individual performance of boys and girls to a greater degree than grades or school recommendation; they are relatively free of bias from individual teachers or counselors.

- The present tests provide a uniform standard that is independent of differences among secondary schools and teachers with respect to grading standards.

- The present tests have promoted a high degree of geographic mobility in choice of college on the part of perhaps 10 to 15 percent of the college-bound population. They have, in effect, represented the student to the college, when the student's secondary school was too far away to be known intimately to the college.

- The present tests have, to a useful degree, freed secondary schools from curricular restrictions by the colleges.

The Scholastic Aptitude Test in particular has made it possible for students to offer a variety of college preparatory patterns. The Achievement Tests have provided a wide range of options and have been reasonably flexible with respect to curricular change.

- The fact that the present tests are scored in quantitative terms and thus are subject to statistical accumulation and summary has permitted a useful degree of communication for guidance purposes to prospective college students -- for example, the Manual of Freshman Class Profiles.

- The present Achievement Tests have provided a limited basis for communication between school and college teachers and thus have contributed to a better articulation of school and college programs.

Analysis of the strengths and inadequacies of the tests becomes more sharply etched when they are viewed as channels through which human resources for higher education are directed and by which communications are carried from one level of education to another. Acting in a forward direction, the breadth and adequacy of the tests have important consequences for the fulfillment of educational and career aspirations of young persons, and for the realization of institutional objectives by colleges. Acting in the opposite direction, the tests serve as a matrix by which aptitudes for education are shaped and identified, and through which a young person becomes engaged in the sequential, social, decision process that constitutes college admission.

There is little question that, in the past, the guidance and admissions tests of the Board have served as instruments for the identification of talent, as bases for in-

creased access to the systems of higher education, and as a stimulus for improved standards of secondary education. Now, the changing shape of higher education demands an intensified effort to evaluate the extent to which the tests will continue to make these contributions, and to develop new approaches to the structure of the examinations that may augment and strengthen their productive role in this process. To this end, the work of the Commission should rest on a fourfold foundation.

1. An explicit set of assumptions, judgments, and observations that will describe the educational conditions under which tests would be expected to operate in the future.

2. An understanding of diverse groups of young people at different points in their educational careers and the problems they confront.

3. A reexamination of the theory of testing from the perspective of several fields in the social sciences, together with a review of the empirical evidence relating to testing that has been developed by researchers in these disciplines.

4. An initial formulation of the desirable properties and functions that should characterize the Board's tests a decade hence.

The future educational setting of college admissions and guidance tests

The Commission is asked to describe a comprehensive set of testing activities supporting open access to higher education under conditions in which, as stated earlier, 80 percent of high school graduates and 70 percent of 18-year-olds, together with significant numbers of adults, will make up the college-bound population. The exact figures may be debatable, and the time at which this level

will be reached may be even more so. The important point is that our reference is to mass higher education and to the full range of people making up the potential post-secondary population.

There are a number of assumptions, observations, or judgments associated with this basic premise that should be made explicit despite the necessity that, because they deal with future conditions, they will inevitably be speculative.

1. We should assume that the college-bound population will be constituted from among nearly the full range of the country's 18-year-olds. This group will be exceedingly diverse, not only with respect to their variance in particular abilities, but also with respect to the range of different abilities relevant to the variety of post-secondary education programs available 10 to 20 years hence.

2. We should probably assume that the differences in quality and in emphasis among the country's elementary, junior high, and senior high schools and among urban, rural, and suburban school systems will be at least as great as they are today.

3. We should attempt to specify as accurately as we can the relationship between the proposed Board tests and the information about students available from school records. Some of the questions bearing on this relationship are: To what extent should school or college grades be considered criteria for the tests? To what extent should there be redundancy between the information supplied by the tests and known by the school? To what extent should "internal" tests be incorporated into composite scores? To what extent can we identify and measure by tests attributes that are not now discernible from information known to the school? Can we identify circumstances in which "external" tests will not be needed?

4. We should assume that the makeup of the educational programs of two- and four-year colleges and universities, 10 to 20 years hence, will be considerably more diverse than it is today in order to support the needs for more highly trained manpower and the opportunities for leisure that can be expected in an advancing technological society.

5. There ought also to be an explicit statement of the expected college-bound patterns in the future. Questions that must be asked include the following: Will the college-bound population continue to be largely constituted by the time students reached the seventh or eighth grades, as seems to be the case today? If so, what contribution can tests or other related services make to opening opportunities at this level? Will geographic mobility in the movement from secondary school to college increase or decrease, and how necessary will it be for students to have available to them a high degree of geographic mobility? Is it to be expected that the majority of students will begin their college work in a junior or community college as some have suggested, and to what extent will this be more or less uniform throughout the country? What kind of geographic mobility can be expected in the movement from two- to four-year institutions? To what extent will postsecondary institutions specialize in their academic offerings, and to what extent will they be truly comprehensive institutions? How rapidly will the expansion of facilities for postsecondary education occur, and will there be pressure areas such as the one found today in the densely populated Northeastern section of the country?

All the foregoing assertions and speculations suggest the need to set forth the philosophy and role of tests under circumstances of mass higher education. Such a statement should reflect a belief that tests, properly

designed and used, can represent the individual student to himself and to those responsible for his education. The emphasis in the description the Commission is seeking should be on tests that will support choice and decision by individual boys and girls and that will contribute to sound advice from parents, teachers, counselors, and college admissions and placement officers. But, in emphasizing the role of tests in supporting personal choice and decision making, we should also recognize that a degree of tension between the individual's interests and the institution's interests is inevitable. Future testing activities should promote a greater acceptance of the collaborative contest in which college and career decisions must be embedded and an understanding of the broadened meaning of college on the part of the student. Similarly, an enhanced appreciation for the reciprocal rights of student and institution should be fostered: for the student, recognition of his responsibility to use test information intelligently and to plan his educational career rationally; for the institution, acceptance of the student's need for a thorough delineation of the college's "personality" and his right to describe himself through a set of optional tests (sufficiently wide ranging) to permit some positive statements in support of his candidacy for admission.

One consequence of tests developed from such a philosophy may well be that of making increased demands on the professional skills of college admissions officers. To the extent, however, that a logically designed series of comprehensive testing and guidance activities succeeds in supporting more rational and well-planned student decisions about college, the system of higher education and the institutions within it may, with the student, benefit equally.

Groups of students at points in their careers

The description of the proposed tests should focus on the general population of young people in the country at four points in their educational careers.

1. In the seventh and eighth grades, because it is at this time that the college-bound population takes its near-final form. The principal purpose of the tests at this point should be to help encourage an interest in continuing education through senior high school and beyond. The greatest possible breadth should be sought at this point; as many doors should be left open as possible.

2. In the tenth and eleventh grades, because it is at this time that young people make definite plans for college attendance. The principal purpose of the tests at this point should be to support choices and decisions by students with regard to college program and institutional choice.

3. At the end of the twelfth grade, when problems of course selection and placement in college loom large. The emphasis here ought to be squarely on the placement function within college curriculums and not primarily on selective admissions.

4. In the thirteenth and fourteenth years, when transfer from two-year to four-year colleges or among four-year colleges occurs. The emphasis here should also be on placement in rather than admission to four-year institutions.

In considering these tests and services, and the administrative arrangements coordinate with these decision points, we should recognize that there will be wide variation among students in their interests and circumstances. There are two important groups that present issues of such critical importance as to require special focus and at-

tention. These are, first, the Board's continuing concern with the identification and support of highly talented students, and, second, a newer but equally great concern for Negro youngsters and others in the various poverty groups, both rural and urban. It will sharpen the Commission's consideration of many of the issues under study if it keeps these two groups of young people in clear view throughout the inquiry, and if the descriptions of the proposed tests clearly and obviously show an improvement over existing practices in the instances of these two important groups of young people.

Contributions of the social sciences to test theory and practice

The Commission should undertake a thorough review of the theory and practice underlying existing widely used tests, including the Board's but not limited to them. There are grounds for a belief that current testing practice has been heavily dominated by narrow, empirical studies and has uncritically continued many of the theoretical formulations of those who during the 1930s built the basis for much of current testing practice.

As a starting point, and before turning directly to the preparation of the descriptions of the proposed tests, a review should be undertaken of the empirical evidence accumulated over the past 30 years on the development and functioning of educational tests. Such a review would identify and illuminate omissions in the available evidence and would support judgments about whether tests do or do not operate in a socially responsible manner, as measured by the kinds of students who go or do not go to college and by the kinds of programs they select and undertake successfully. Much, if not all, of the available

evidence is narrow in scope and not closely related to such important questions as the nurture of talent and the equalization of opportunity. What might come out of such a review would at least be a basis for future research planning that would assure that in 10 or 20 years our successors would not be lacking in this evidence.

A second, coordinate phase of this aspect of the Commission's work would be that of relating the theory underlying the present tests to current knowledge and generally accepted principles in a number of social science fields, as follows.

Psychometrics. We should review our position with respect to test reliability, length, and internal consistency characteristics, and to scaling and validity. In particular, we need to broaden our definition of criteria for the tests, and we probably also need to admit that the usual criteria of educational attainment are necessary but insufficient for our purposes.

Education. Recent developments in education should be examined, especially that part pertaining to curriculum, teaching practices, and guidance. Some questions we need to ask are: Is our preoccupation with reading skill at the twelfth-grade level consistent with current knowledge about successful teaching and learning techniques at this grade level? Do the present Achievement Tests place too much emphasis on problem solving and not enough on measuring and understanding of the form and structure of the subject?

Linguistics. To what extent are current efforts at measuring verbal reasoning ability up to date compared with linguistic findings about variations in the use of language among various elements in the total population? Could we get a more accurate measure of verbal ability among poverty groups if we reduced our reliance on standard academic

English? Should we try to relate somehow to the oral tradition of at least some of the country's subcultures?

Sociology and anthropology. Among the questions these disciplines may help answer are: How can we identify subgroups within the general college-bound population for whom special tests would be needed? What are the dimensions or characteristics of colleges that are most important in supporting student choice and decision making? How can we learn to couch questions in terms that will be more meaningful to students whose cultural background is different from the middle-class background item writers usually assume. What techniques can be used to foster better communications among colleges, secondary schools, students, parents, teachers, and professional testing organizations?

Cybernetics and computer sciences. What are the implications of the revolution in data processing, information storage and retrieval, and communications media for education in general and testing in particular? Assuming the increasing availability of computers and an increasing growth of networks of communications systems, what possibilities exist for computer-based tests, interactive guidance systems, and data banks supporting educational decisions? How would this alter the character of the testing activities of the Board a decade from now, and how can this new technology be directed to the service of students, rather than mainly to the service of testing organizations?

If it is correct that conventional tests are supported more by mystique than by sound theory, and that testing practice is governed more by the machinery of grading than by implementation of a sound educational philosophy, then the descriptions of the tests of 1975 or 1980 should benefit greatly from an examination of the contributions that each of these fields may make to future development.

An initial description of the objectives of future tests

One of the goals of the Commission is to provide a description of the tests that the Board might develop and offer in the next decade. Without in any way prejudging the conclusions of the Commission, some suggestions regarding the parameters of these new tests are of interest, even though at this point they represent preferences that need to be tempered by criticism and thoughtful examination.

1. Consistent with the need to maintain sufficient coherence to permit meaningful interpretation of scores, there should be the widest possible option open to a student, both in terms of the particular tests he might take and also, possibly by means of "branching" tests, in the questions he might elect to answer.

2. Families of tests could be developed in which sets of tests would be logically, but loosely, interrelated, thus providing new information through comparative scores. An example might be the testing of poverty groups using their vernacular as well as using standard English.

3. A reduction in the reliance on reading as the principal means by which questions and problems are presented could be sought, and increasing use of auditory and visual stimuli could well be explored.

4. An increased opportunity for free response by the student, both written and oral, would be welcome, as would the introduction of greater diversity in the modes of testing in general.

5. The definition of "aptitude" should be broadened to include several additional aptitudes, some of which would be "nonacademic," as this term is used in the traditional sense.

6. There could be a reduction in the emphasis on obtaining test reliability through long sequences of similar items, and an increased emphasis on shorter work samples, and similar ratings of representative products of past performances.

7. Test scores should be augmented by verbal interpretations, which would convey more comprehensively the meaning and complexity of a particular performance in a variety of contexts.

8. A series of testing activities should be structured to proceed logically over a period of time, so that they explicitly support recognition by a student of the sequential, interactive nature of his career and educational decisions.

9. A description of the proposed tests would also extend to include description of a comprehensive program of publications, films, statistical summaries, and other services to students, parents, secondary schools, and colleges, so that the emphasis would be on the provision of information important to students and so that tests would be only part of the larger program offering.

Finally, a Commission that directs its attention to the intensive study of college admissions and guidance tests cannot afford to neglect consideration of more appropriate criteria of college achievement, for any set of tests supporting postsecondary education decisions must ultimately be justified within this context. The educational process so identified is seen as culminating in the growth or modification of a student in a variety of ways. These modifications may involve not only the acquistion of new knowledge, skills, and information but also the development of an increased capacity for critical, independent thinking; increased emotional awareness of the needs of others; a greater capacity for self-insight; and a deeper, more

rationally based commitment to a set of personal values. The development of criteria of greater scope and sensitivity and the understanding of the nature of the postsecondary educational environment must therefore be considered as a corollary of any study of new testing activities; indeed, more sensitive and refined descriptions of the outcomes of this educational process are essential if significant advances in this area of testing are to be forthcoming. The degree to which a student develops appropriate educational values, becomes increasingly self-sufficient, has greater self-insight, is flexible and open-minded in his orientation to problems, and rests his values on rationally based commitments may surely be advanced, not only by involvement in the processes of higher education, but also by participating in a well-conceived program of tests and related services leading to such involvement. Conceiving higher education as an adaptive system that seeks to transform human intellectual resources into an educated self-directed citizenry must therefore also lead to an appreciation of the pivotal role testing might play in this process and the promise that the pursuit of this problem by the Commission on Tests might bring to the college-bound population.